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Federal Communications Commission
Office of the Secretary

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

93-199

In the Matter of	)	
	)	RM-7610
Request for Rulemaking Setting Standards for Aviation Receivers	)	

COMMENTS OF THE
NATIONAL ASSOCIATION OF BROADCASTERS

For many years, the National Association of Broadcasters ("NAB")[1/] has expressed great concern over restrictions on broadcast tower siting based upon the potential for communications signal interference to air navigation facilities.[2/] These concerns have been heightened greatly in more recent years, due to the growing number of broadcast applications (and potential broadcast applications) that have

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[1/]NAB is a nonprofit, incorporated association of radio and television broadcast stations and networks. NAB serves and represents America's radio and television stations and all the major networks.

[2/]See, e.g., NAB Comments in MM Docket No. 85-108, filed December 2, 1985. These comments responded to the Commission's Notice of Proposed Rule Making (50 Fed. Reg. 19,392 (May 8, 1985)) exploring the establishment of technical standards and protection criteria vis-a-vis the interference potential between FM broadcasting and the aeronautical radio services.

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been effectively "blocked" by Federal Aviation Administration ("FAA") "air hazard" determinations.[3/]

Increasing the gravity of the situation even more, the FAA last year initiated a rulemaking proceeding[4/] proposing an expanded regulatory regimen that would codify existing FAA procedures and technical standards for evaluating air navigation interference and would impose new notification requirements on a wide variety of communications users.[5/] The record established in this FAA rule making includes widespread opposition to the FAA proposals -- opposition voiced not only by communications users and their representatives, but also by the FCC itself.[6/] Among

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[3/] See, e.g., "Applications for Construction Permits To Modify FM Facilities; Status Report as of March 1, 1991," released by the FCC on March 1, 1991; see also Memorandum Opinion and Order in MM Docket No. 88-358 (Beaumont, Texas) FCC 91 R-16, adopted Feb. 13, 1991, released Feb. 27, 1991, ¶ 7, wherein the FCC Review Board observed that "[a]fter recent negotiations with the FAA, the [Mass Media] Bureau has adopted a policy of supporting grant of applications with EMI problems only when FAA approval has been obtained."

[4/] Notice of Proposed Rule Making ("FAA Notice") in Docket No. 26305, 55 Fed. Reg. 31,722 (Aug. 3, 1990), subsequently corrected at 55 Fed. Reg. 32,999 (Aug. 13, 1990), 55 Fed. Reg. 35,152 (Aug. 28, 1990) and 55 Fed. Reg. 37,287 (Sept. 10, 1990).

[5/] The FAA bases its entire analysis method for determination of hazard on the susceptibility of airborne navigation and communications equipment (avionics) to interference from other radio frequency sources. Specifically at issue for avionics operating in the bands 108.0 MHz to 117.99 MHz and the 118.0 MHz to 136.99 MHz is the ability of Instrument Landing Systems (ILS) to sufficiently suppress or reject FM and VHF-TV signals.

[6/] See, e.g., Joint Comments of NAB and the Association for Maximum Service Television ("MSTV"), filed Dec. 31, 1990; Comments of the Federal Communications Commission, filed Dec. 31, 1990; see also letter dated January 4, 1991, from FCC Chairman Alfred C. Sikes to Department of Transportation ("DOT") Secretary

(continued...)

the recommendations of various parties is the need for the improvement of air navigation receivers -- improvement that would make these receivers more immune to the internally-generated interference which can be created due to air navigation devices' reception of various communications-related frequencies.[7/]

On December 21, 1990, John Furr & Associates, Inc. ("petitioner" or "Furr"), filed the above-referenced Petition for Rule Making (RM-7610) urging the Commission to initiate proceedings aimed at establishing standards for aviation receivers.[8/] In these comments, NAB supports petitioner's request that the agency initiate such proceedings. Moreover, we urge the Commission, in addressing the matter of establishing aviation receiver standards, to also address a variety of related issues. These issues go to the very heart of the air navigation interference controversy. FCC establishment of such a valid and reliable record will better enable the government to resolve these matters and, specifically, better equip the FCC to negotiate directly with the FAA.[9/]

[6/](...continued)
Samuel Skinner, urging the DOT, FCC and FAA to work more closely to resolve matters involving air navigation interference from over-the-air communications services.

[7/]See, e.g., Joint NAB-MSTV Comments in FCC Docket No. 26305, supra n.6 at 14-16.

[8/]FCC Public Notice "Office of the Secretary: Petitions for Rule Making Filed," Report No. 1836, released Feb. 7, 1991.

[9/]New statutory requirements imposed by 1987 amendments to the Federal Aviation Act of 1958 require coordination between the FAA and the FCC on these air navigation interference issues. Pub. L.
(continued...)

I. THE COMMISSION SHOULD INITIATE PROCEEDINGS TO REQUIRE AIRBORNE NAVIGATION AND COMMUNICATIONS RECEIVERS TO MEET MINIMUM PERFORMANCE SPECIFICATIONS.

Petitioner notes that, as a communications consultant, over half his work has involved conflicts with the FAA's interference prediction model, resulting in "hazard determination" notices from the FAA. Observing that his work relates to FM and television clients, petitioner expresses great concern, as does NAB, over the potential expansion of FAA regulatory activity to virtually all radio communications services.

Continuing the theme raised in the FAA Docket No. 26305 record, petitioner criticizes the FAA interference model as unrelated to reality. He points to the "lack of disasters" caused by any malfunctions of avionic radios due to broadcast signal interference.[10/] He contends, rightfully we believe, that this record provides prima facie evidence that the avionics radios generally employed in industry and by private pilots are far superior to the "worst case" equipment overly protected by the FAA interference standards.

Petitioner then correctly points out the error of the FAA in not directing its regulatory scheme to the most efficient

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[9/](...continued)
No. 85-726, 85th Cong. 2d Sess., 72 Stat. 731 (1958), as amended, Pub. L. No. 100-223, 100th Cong., 1st sess., § 206, 101 Stat. 1521 (1987), codified at 49 U.S.C.A. § 1501(c) (West Supp. 1990).

[10/]See Petition at 3.

and cost-effective way of resolving the problem: requiring that no such "worst case" avionics receivers be employed in the air.

While we agree with all the observations made by petitioner, it is his latter point -- the one dealing with inferior avionics receivers -- that is most germane to his request for Commission initiation of a proceeding. Instead of taking steps to remove such inferior avionics receivers from use, or requiring the upgrading of these receivers (or the use of "retrofit" signal filters, etc.) or working with the FCC to develop receiver standards, the FAA has placed the financial burden of compliance only on those who transmit communications signals. For example, and as noted by Furr, one of his broadcast clients spent nearly $150,000 on legal and consulting fees and a negotiation period of a year to receive a construction permit.[11/]

Were such expenses to be borne by communications users in general -- as clearly is suggested by the aggressive posture of the above-referenced FAA rulemaking Notice -- the costs to communications spectrum users would be enormous. The costs to install filters in these inferior avionics receivers, and to manufacture receivers with reduced interference susceptibility, are quite minimal, especially when viewed in comparison to the alternative costs to communications companies. Moreover, the record established in the FAA proceeding already provides ample evidence that the standards being employed by the FCC to predict

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[11/] Id.

interference -- let alone truly harmful interference with any relevance to air safety -- are far more stringent than necessary. These factors more than suggest that the key to resolving the instant air navigation controversy is improving the government's avionics interference standards and, as suggested by petitioner, the quality of the avionics receivers, rather than on imposing new or continued burdens on communications companies.

II. UNITED STATES COMPLIANCE WITH UPCOMING INTERNATIONAL RECEIVER STANDARDS REQUIRES PROMPT INITIATION OF THE REQUESTED PROCEEDING.

Though not acknowledged by petitioner, NAB points to upcoming deadlines for full, in-service implementation of International Civil Aeronautics Organization ("ICAO") regulations for avionics receiver design.[12/] These standards, known as the "Chicago Convention, Annex 10," will become mandatory on January 1, 1998. They set mandatory as well as recommended technical standards for aviation navigation and communications equipment, including immunity from two-signal, third-order IM products and minimum signal levels for receiver desensitization in the presence of VHF FM signals.

As such, these ICAO avionics receiver standards are an important starting point for the establishment of domestic aviation receiver standards. That is, while we trust that the

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[12/] See International Civil Aviation Organization, International Standards, Recommended Practices and Procedures for Air Navigation Services, Annex 10 to the Convention on International Civil Aviation, April, 1985.

United States will adopt receiver standards at least conforming to these minimum design requirements, it is also our hope that our government will adopt standards even more stringent -- thus ensuring that concerns over communications interference to aviation radio would be greatly diminished, if not totally eliminated. In conjunction with the ICAO standards, the Commission also should consider the work under way by the International Radio Consultative Committee ("CCIR") Study Group 12 for Interservice Sharing and Compatibility, Task Group 2 on Avionics, as well.

In comments being filed today, the Association of Federal Communications Consulting Engineers ("AFCCE") urges the Commission to grant the subject petition and to seek specific public comment on a variety of questions concerning avionics receiver design and the documentation of actual interference problems caused by communications services to aeronautical facilities. The AFCCE also recommends that the Radio Technical Commission for Aeronautics ("RTCA") participate specifically in this proceeding and lend its expertise to the resolution of the matters that will be at issue. NAB strongly supports these AFCCE recommendations.

III. THE FCC PROCEEDING SHOULD ENCOMPASS A WIDE RANGE OF AVIONICS INTERFERENCE ISSUES.

In addition to encompassing the issues raised by petitioner, we believe the FCC Notice should address many other, related, aviation interference issues. Although AFCCE, in its

comments today, has identified many of these issues, we urge the Commission to adopt a broad as possible Notice to elicit all relevant technical and policy guidance. That is, we believe this proceeding should be designed to afford the FCC in particular, and the United States government in general, with the kind of detailed, factual and unbiased information that is necessary for a rational resolution of the ongoing aviation interference problem.

There are no current domestic regulations or standards that specify the performance criteria for receivers used in general aviation aircraft. NAB believes the Commission's proceeding should seek to establish these performance criteria. The Commission should specifically address the receiver generated intermodulation (IM) products and poor desensitization performance that is assumed by the FAA and used in their computer model. An appropriate rule making should also address: (1) the existence of actual instances of interference to aviation facilities by FM and TV broadcast services; (2) the performance of existing avionics in the presence of "real world signals"; (3) design considerations for future avionics; (4) the logistics and costs of retrofitting older or poorer quality equipment with appropriate filters to improve performance; and (5) technical standards that should be used to determine the performance of aviation receivers. Moreover, NAB believes that any avionics technical performance standards should apply not only to ILS but

also should extend to other aviation navigation and communications equipment, both airborne and ground based.

We are confident that the Commission has the authority to adopt the aviation receiver standards requested not only by Furr, but by NAB and other communications users.[13/] Additionally, we believe the Commission has the requisite expertise to address the establishment of interference protection criteria and interference models that will more accurately depict such interference and provide appropriate protection, especially in light of the imposition of rational and effective technical standards for avionics receivers.

IV. CONCLUSION

For the reasons stated above, NAB urges the Commission to grant petitioner's request that the agency adopt standards for avionics radios. Moreover, and as outlined above, we recommend that the Commission proceeding exploring such aviation radio technical design standards also address the many issues relating to communications interference to aviation radio. By taking such

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[13/] See, e.g., 47 U.S.C. §§ 303(f), 303(g) and 303(r). NAB notes that the Commission is currently involved in an analogous exercise of establishing technical standards and licensing procedures for aircraft earth stations. In its Notice of Proposed Rule Making in PR Docket No. 90-315, 5 FCC Rcd. 3933 (1990), the Commission states, at ¶ 21: "The cause of our continuing concern for protecting safety communications, the potential number of system users, and the fact that the FAA may require compliance with the standards adopted by [Special Committee]--165, including receiver standards, we request comment regarding which, if any, standards should be specified in our Rules." (Emphasis added.)

prompt and broad actions, the Commission will better equip itself to deal effectively with the FAA in not only establishing receiver standards but in resolving the aviation interference controversy as a whole.

Respectfully submitted,

NATIONAL ASSOCIATION OF BROADCASTERS
1771 N Street, N.W.
Washington, D.C. 20036

Henry L. Baumann
Exec. Vice President & General Counsel

Barry D. Umansky
Deputy General Counsel

Terry L. Etter
Staff Attorney

Kelly T. Williams
Staff Engineer
NAB Science & Technology

Senny M. Ponomarenko
NAB Legal Intern

March 11, 1991

CERTIFICATE OF SERVICE

I, Judith L. Gerber, do hereby certify that a true and correct copy of the foregoing "Comments of the National Association of Broadcasters" was sent, via first class mail, on this date, March 11, 1991, to the following:

Mr. John R. Furr
John Furr & Associates
2700 NE Loop 410
Suite 325
San Antonio, TX 78217

The Honorable Alfred C. Sikes
Federal Communications Comm.
1919 M Street, N.W.
Room 814
Washington, D.C. 20554

The Honorable James H. Quello
Federal Communications Comm.
1919 M Street, N.W.
Room 802
Washington, D.C. 20554

The Honorable Sherrie Marshall
Federal Communications Comm.
1919 M Street, N.W.
Room 826
Washington, D.C. 20554

The Honorable Andrew C. Barrett
Federal Communications Comm.
1919 M Street, N.W.
Room 844
Washington, D.C. 20554

The Honorable Ervin S. Duggan
Federal Communications Comm.
1919 M Street, N.W.
Room 832
Washington, D.C. 20554

Mr. Roy Stewart
Chief, Mass Media Bureau
Federal Communications Comm.
1919 M Street, N.W.
Room 314
Washington, D.C. 20554

Mr. William Hassinger
Assistant Chief
Mass Media Bureau
Federal Communications Comm.
1919 M Street, N.W.
Room 314
Washington, D.C. 20554

Mr. Larry D. Eads
Chief, Audio Services Division
Mass Media Bureau
Federal Communications Commission
1919 M Street, N.W.
Room 302
Washington, DC 20554

Mr. Michael J. Marcus
Ass't Bureau Chief for Technology
Field Operations Bureau
Federal Communications Commission
1919 M Street, N.W.
Room 734
Washington, DC 20554

Edward W. Hummers, Jr., Esq.
Fletcher, Heald & Hildreth
1225 Connecticut Avenue, N.W.
Suite 400
Washington, DC 20036-2679

Russell C. Harbaugh, Jr., P.E.
President, AFCCE
c/o John F.X. Browne & Associates
525 Woodward Avenue, Suite 100
Bloomfield Hills, MI 48304

Judith L. Gerber